FORM PTO-1390 (REV 12-29-99) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER: **MUNR5731**

U.S. APPLICATION NO. (If known, see 37 CFR 1.5): 09/700697

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/FR99/01173	**17 May 1999**	**19 May 1998**

TITLE OF INVENTION: **METHOD FOR REMOTE CONNECTION OF MACHINES AND CORRESPONDING ELECTRONIC ANALOG APPARATUS**

APPLICANT(S) FOR DO/EO/US: **Jean-Francois TAILLENS**

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. [X] This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. [ ] This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. [X] This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. [X] A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. [X] A copy of the International Application as filed (35 U.S.C. 371(c)(2))
   a. [X] is transmitted herewith (required only if not transmitted by the International Bureau).
   b. [X] has been transmitted by the International Bureau.
   c. [ ] is not required, as the application was filed in the United States Receiving Office (RO/US).
6. [X] A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. [X] Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
   a. [X] are transmitted herewith (required only if not transmitted by the International Bureau).
   b. [X] have been transmitted by the International Bureau.
   c. [ ] have not been made; however, the time limit for making such amendments has NOT expired.
   d. [ ] have not been made and will not be made.
8. [X] A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. [ ] An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. [ ] A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern document(s) or information included:

11. [X] An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. [ ] An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. [X] A FIRST preliminary amendment.
    [ ] A SECOND or SUBSEQUENT preliminary amendment.
14. [ ] A substitute specification.
15. [ ] A change of power of attorney and/or address letter.
16. [X] Other items or information:

- Copy of International Application Published Under the Patent Cooperation Treaty (PCT), FRENCH LANGUAGE, including WO 99/60499, with ISR, including 14 pages of specification (including 10 claims) and 1 sheets of drawings (Figures 1 and 2) and 6 pages of ISR (in both English and French);
- French language Specification corresponding to WO 99/60499 (18 pages);
- English language translation of specification of WO 99/60499 (6 pages);
- English language translation of claims of WO 99/60499 (2 pages)
- French language specification, as modified (25 pages);
- Modified page 1a, French language (1 page);
- English translation of portion of modified specification (7 pages);
- English translation of claims as modified (3 pages) and
- English translation of PCT/FR99/01173 as modified and formatted (cover pg + 18 pgs + 1 pg dwg).

I hereby certify that all above-listed documents are being deposited with the United States Postal Service as Express Mail No. EL 426 709 835 US, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C.20231 on June 19, 2000.

Signed [Alan W. Young] Alan W. Young Date: November 17, 2000

529 Rec'd PCT/PT 17 NOV 2000

U.S. APPLICATION NO. (if known, see 37 CFR 1.5)	INTERNATIONAL APPLICATION NO.	ATTORNEY'S DOCKET NUMBER
09/700697	PCT/FR99/01173	MUNR5731

17. [X] The following fees are submitted:

	CALCULATIONS PTO USE ONLY	
BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :		
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO **$1000.00**		
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO **$860.00**		
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO **$710.00**		
International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) **$690.00**		
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) **$100.00**		
ENTER APPROPRIATE BASIC FEE AMOUNT =	$ 860.00	
Surcharge of **$130.00** for furnishing the oath or declaration later than [ ] 20 [ ] 30 months from the earliest claimed priority date (37 CFR 1.492(e)).	$	

CLAIMS	NUMBER FILED		NUMBER EXTRA	RATE		
Total claims	10	- 20 =	0	X $18.00	$ 0	
Independent claims	2	- 3 =	0	X $80.00	$ 0	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			0	+ $270.00	$ 0	
TOTAL OF ABOVE CALCULATIONS =					$ 860.00	
[✓] Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.					$ 430.00	
SUBTOTAL =					$ 430.00	
Processing fee of **$130.00** for furnishing the English translation later than [ ]20 [ ]30 months from the earliest claimed priority date (37 CFR 1.492(f)). +					$	
TOTAL NATIONAL FEE =					$ 430.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). **$40.00** per property +					$	
TOTAL FEES ENCLOSED =					$ 430.00	
					Amount to be refunded:	$
					charged:	$

a. [ ] A check in the amount of $_____ to cover the above fees is enclosed.

b. [ ] Please charge my Deposit Account No. _____ in the amount of $_____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. [ ] The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. _____. A duplicate copy of this sheet is enclosed.

[X] **CREDIT CARD: Form 2038 Enclosed**

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

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37,970

REGISTRATION NUMBER

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	TAILLENS, Jean-Francois	Art Unit No.:	To Be Assigned
		Examiner:	To Be Assigned
Int'l App. No.:	PCT/FR99/01173	Att'y Docket:	MUNR5731
Int'l Filing Date:	17 May 1999		
Title:	Method For Remote Connection Of Machines And Corresponding Electronic Analog Apparatus		

PRELIMINARY AMENDMENT

Hon. Commissioner for Patents & Trademarks
BOX PCT
Washington, DC 20231

Sir:

Prior to calculating the filing fees for entry into the national phase under the PCT, kindly amend the above-identified application as follows:

IN THE CLAIMS:

Claim 3, line 1, change "according to either of the claims 1 or 2" to --according to claim 1--;

Claim 4, line 1, change "according to any one of the claims 1 to 3" to --according to claim 1--;

Claim 5, line 1, change "according to any one of claims 1 to 4" to --according to claim 1--;

Claim 8, line 1, change "according to either one of claims 6 or 7" to --according to claim 6--;

Claim 9, line 1, change "according to any one of claims 6, 7 or 8" to --according to claim 6--, and

Claim 10, line 1, change "according to any one of claims 6, 7, 8 or 9" to --according to claim 6--.

REMARKS

The present preliminary amendment amends the claims to remove multiple dependencies therefrom. It is now believed that the present application is in condition for examination on the merits.

In the event that the Examiner requires anything further, the Examiner has but to call the undersigned attorney, and whatever is needed will be provided at once.

Respectfully submitted,

YOUNG LAW FIRM, P.C.

By: _____

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I hereby certify that this preliminary amendment is being sent by Express Mail (label number EL 426 760 234 US) to the Hon. Commissioner for Patents and Trademarks, US Patent & Trademark Office, Washington, D.C. 20231 on

November 17, 2000
Date

ALAN W. YOUNG
Typed or printed name of person mailing paper

_____
Signature of person mailing paper

METHOD FOR REMOTE CONNECTION OF MACHINES AND CORRESPONDING ELECTRONIC ANALOG APPARATUS

The present invention relates to the remote connection of several persons and devices by broadcasting communications in the ether with the use of at least one device having a transmitter function and at least a second device having a receiver function. It concerns above all a method consisting of assigning a code to the communications broadcast in the ether.

At present, contacts are habitually made by reading information in the press, telephone books and other catalogues in which the activities offered are classified by category, for example, hotels, restaurants, garages, picked up from the press and other means of communication by sectors of interest such as services, purchase-sales offers, leisure interests etc., making the tasks of research more and more difficult because of the increasing number of elements advertised everywhere in every language. Moreover, these means are practically impossible to be used in real time and in situ, during travel, professional and leisure occupations, this information or data also being transmitted by means of radio or television. The selective broadcasting of information for a population requiring information by selective broadcasting of information from a regional transmitter is also known.

These known techniques require the centralisation of data before they are published or broadcast. The result is that these offers do not especially correspond to the expectation of the person and not perhaps in his language.

An additional transmitter re-broadcasting information from the regional transmitter is also known (see EP 0 259 717).

The latter procedure involves the use of at least three devices two of which are pre-set between themselves and in communication without any simultaneous interfering transmission in their environment. Thus there is a severe geographic limit and a difficulty in using a fourth device. Moreover, it only concerns selective broadcasting of information transmitted elsewhere, thus again the absence of choice of the timing of the transmission for the user of the device selecting the information.

An interactive mode of application is also known by using a timed transmitter-receiver device. In this method it is essential that one of the two devices does not transmit during the broadcasting, this method of radio-paging known under the name of "Alphapage" "Alphapage" ™ is piloted by a switchboard and is only usable in an area where a set-up infrastructure has been built, contact between persons being established by telephone and needing a key, under the form of a frequency

attributed to each end user, thus the limitation to a group of persons established ahead. Document US 5 086 394 describes the individual devices activated by remote paging.

Thus, the connecting of persons with common poles of interest is habitually carried out through the Internet and by the broadcasting of information and announcements through the traditional media such as television or by reading press advertisements in dialogue mode (one to many).

These known techniques for selective broadcasting of information for a population demanding information by selection of announcements broadcast from a regional transmitter (see EP 0 259 717), implies the centralisation of data and the identification of those concerned ahead of broadcasting and/or publication. The result

is that these solutions no longer correspond conveniently to the expectation of the end user, nor even perhaps his language.

Data transmission in dialogue mode is also known (one to one) and in distribution mode (one to many) with present day technologies such as cellular telephone networks (GSM, UMTS, Bluetooth etc.).

The aim of the present invention is to remedy these drawbacks. Thus, the method of connection of persons or nomadic devices by broadcasting selective elements of messages in the ether by at least one transmitter-receiver device in transmitting function and at least one second transmitter-receiver device in receiving function in order to establish, in a direct fashion, selected interactive links by means of identification keys for different sectors of activity, common poles of interest and user codes, in which the respective users are connected by said devices comprising at least the following means: a data processing module linked directly or not by a bus to a sound or other signal generator module and a memory comprising a programmable data base. The devices being transmitter-receivers alternately broadcast and receive at least one selected code from the pre-programmed data base according to a standard common to the said devices, the said standard comprising a nomenclature typically of tree structure for the goals, poles of interest and/or common sectors of activity defined in the language of the person by divisions, groups, classes and positions.

The method consists of:

- selecting one or several poles of interest and/or sectors of activity of the standard in the first device.

- memorising the pole of interest and/or sector of activity selected,

- transmitting the assigned code to the pole of interest and/or sector of activity selected and alternately receiving the eventual codes of the standard transmitted by other devices,

- moving the first device until it reaches an operational distance from at least one other device alternately broadcasting and receiving one of the said codes of the standard to receive the code transmitted by this second device, the devices located within this same operational distance generating a transmission space.

The communications are announcements chosen by any person and transmitted by the devices at any time.

- signal if there is code matching.

At the moment of transmission, the devices located at an operational distance generate a transmission space by alternately broadcasting and receiving at least one of the said selected codes, the devices together managing the communications of said codes by means of an appropriate communication protocol which occupies the said transmission space generated by the devices which, if there is code matching, release a sound signal and/or the display of the parameters of the collective nomenclature corresponding to the matching code(s) in each device, said display being in the programmed language.

This allows any person whatsoever to communicate with another person, even speaking a different language. Thus the devices can be used abroad.

The nomadic devices being located and functioning at an operational distance present the following stages:

- generation of a transmission space (17, 18) by moving and switching on the devices,

- identification n by means of the appropriate communication protocol of the matching codes,

- transit in the transmission space of selected identification codes,

- alternate switching of said devices to the situation of master or slave to enable them to broadcast, receive, identify and manage respectively between themselves the said identification codes and their respective messages.

This allows several devices to communicate as soon as they are at an operational distance for communication, a distance determined relative to the power of the transmission modules and the sensitivity of the receiver modules. A transmission space is created and the communication protocol is activated. Together they operate a protocol, which generates the transmission space in which the broadcast codes transit, especially the codes appropriate to those selected in the other devices of the transmission space. As soon as at least one selected code in each of them is matching, the devices inform that there is an opportunity by at least one sound signal and/or a visual by displaying the element(s) and message(s) concerned on a screen.

According to other specifications:

The first nomadic device arriving at the transmission distance generated by the simultaneous operation of other nomadic devices carries out the following stages:

- adapting to the conversational mode, then

- switching alternately in the master-slave mode, for

- broadcasting its selected codes so that the other devices carry out the following steps:

- entering and comparing internally the analog codes and

- signalling the opportunities by display or sound means in the case of the matching of at least one code common to the two devices.

The nomenclature is modifiable and extensible by reformatting transmitted by cable, induction or high frequency transmission, from an external programming device, by setting the programming of the devices on "re-programming" with the help of selection means and/or introduction of data and display means.

Another aim of the invention is a device for remote connection of persons with common goals, poles of interest and/or sectors of activity, making it possible to carry out the above method. The device is characterised in that, being nomadic, it comprises at least one management module for the ensemble, typically a micro-controller, linked directly or not by a bus, to at least one display means, to at least one means of selection and/or data introduction, to at least one sound or other signal generator means, linked to at least one supply module. The data transmission ensemble also comprises at least one transmission means and one receiver means for waves, in particular high frequency waves, linked directly or not through the micro-controller to the memory which also contains operational software of the programmable database and linked to a second memory housing a downloadable database in addition to other operational software. The device is able to broadcast and receive the one or several selected memorised codes in the standard nomenclature linking with at least one other remote connection device located in the same operational distance, broadcasting and simultaneously receiving at least one of the said operational codes. The devices manage together the communication of said codes by an established conversational mode which circulates in a physical or non-physical transmission space generated by the devices which activate, if there is code matching,

a sound signal and/or display of the selected parameters related to the matching code(s) of each device.

According to other specifications:

- the said data transmission ensemble comprises, besides one or several interface means able to link the device with other means of remote connection, in particular one of the interface means being able to connect a fixed receiver physically connected to the cable networks in such a way as to make it possible for peripheral devices such as computers or cable televisions to bring them selectivity services through high rated networks such as Internet of other tel-networks. Another of the interface means communicates with a mobile receiver linked by radio such as so-called alphapage devices, certain radio receivers or television sets, so that the user can select the sectors of activity or poles of interest broadcast.

- the material and computing components for transmission and processing of data are collected in a miniaturised and modular integrated circuit able to manage in stand-alone manner and directly the telematic functions of the method in a way compatible with the known circuit devices of cellular telephony, paging, computing or data management to allow them to communicate between themselves while adding the services of the above method to their own.

PCT/FR99/01173

ENGLISH TRANSLATION OF SPECIFICATION OF WO 99/60499

METHOD FOR REMOTE CONNECTION OF MACHINES AND CORRESPONDING ELECTRONIC ANALOG APPARATUS

The present invention relates to the remote connection of several persons and devices by broadcasting communications in the ether with the use of at least one device having a transmitter function and at least a second device having a receiver function. It concerns above all a method consisting of assigning a code to the communications broadcast in the ether.

At present, contacts are habitually made by reading information in the press, telephone books and other catalogues in which the activities offered are classified by category, for example, hotels, restaurants, garages, picked up from the press and other means of communication by sectors of interest such as services, purchase-sales offers, leisure interests etc., making the tasks of research more and more difficult because of the increasing number of elements advertised everywhere in every language. Moreover, these means are practically impossible to be used in real time and in situ, during travel, professional and leisure occupations, this information or data also being transmitted by means of radio or television. The selective broadcasting of information for a population requiring information by selective broadcasting of information from a regional transmitter is also known.

These known techniques require the centralisation of data before they are published or broadcast. The result is that these offers do not especially correspond to the expectation of the person and not perhaps in his language.

An additional transmitter re-broadcasting information from the regional transmitter is also known (see EP 0 259 717).

The latter procedure involves the use of at least three devices two of which are pre-set between themselves and in communication without any simultaneous interfering transmission in their environment. Thus there is a severe geographic limit and a difficulty in using a fourth device. Moreover, it only concerns selective broadcasting of information transmitted elsewhere, thus again the absence of choice of the timing of the transmission for the user of the device selecting the information.

An interactive mode of application is also known by using a timed transmitter-receiver device. In this method it is essential that one of the two devices does not transmit during the broadcasting, this method of radio-paging known under the name of "Alphapage" ™ is piloted by a switchboard and is only usable in an area where a set-up infrastructure has been built, contact between persons being established by telephone and needing a key, under the form of a frequency attributed to each end user, thus the limitation to a group of persons established ahead (see US 5 086 394).

The aim of the present invention is to remedy these drawbacks. Thus, the method of connection of persons or nomadic devices by broadcasting selective elements of messages in the ether by at least one transmitter-receiver device in transmitting function and at least one second transmitter-receiver device in receiving function in order to establish, in a direct fashion, selected interactive links by means of identification keys for different sectors of activity, common poles of interest and user codes, in which the respective users are connected by said devices comprising at least the following means: a data processing module linked directly or not by a bus to a sound or other signal generator module and a memory comprising a programmable data base, the said devices being transmitter-receivers and broadcasting the pre-programmed data base according to a standard common to the said devices, the said standard comprising a nomenclature typically of tree structure for the goals, poles of interest and/or common sectors of activity defined in the language of the person by divisions, groups, classes and positions.

The method consists of:

- selecting one or several poles of interest and/or sectors of activity of the standard in the first device.
- memorising the pole of interest and/or sector of activity selected,
- transmitting the assigned code to the pole of interest and/or sector of activity selected and alternately receiving the eventual codes of the standard transmitted by other devices,
- moving the first device until it reaches a distance sufficiently close to at least one other device alternately broadcasting and receiving one of the said codes of the standard to receive the code transmitted by this second device, the devices located in this same operation distance generating a transmission space. The communications are announcements chosen by any person and transmitted by the devices at any time.

At the moment of transmission, the devices located at an operational distance generate a transmission space by alternately broadcasting and receiving at least one of the said selected codes, the devices together managing the communications of said codes by means of an appropriate communication protocol which occupies the said transmission space generated by the devices which, if there is code matching, release a sound signal and/or the display of the parameters of the collective nomenclature corresponding to the matching code(s) in each device, said display being in the programmed language.

This allows any person whatsoever to communicate with another person, even speaking a different language. Thus the devices can be used abroad.

The nomadic devices located and functioning at an operational distance generate a transmission space in which the selected identification codes transit by means of the appropriate communication protocol which alternately positions the said devices in master or slave situation to allow them to broadcast, receive, identify and process respectively between themselves the said identification codes and their respective messages.

This allows several devices to communicate as soon as they are at an operational distance for communication, a distance determined relative to the power of the transmission modules and the sensitivity of the receiver modules. A transmission space is created and the communication protocol is activated. Together they operate a protocol, which generates the transmission space in which the broadcast codes transit, especially the codes appropriate to those selected in the other devices of the transmission space. As soon as at least one selected code in each of them is matching, the devices inform that there is an opportunity by at least one sound signal and/or a visual by displaying the element(s) and message(s) concerned on a screen.

According to other specifications:

The first nomadic device arriving at the transmission distance generated by the simultaneous operation of other nomadic devices carries out the following stages:
- adapting to the conversational mode, then
- switching alternately in the master-slave mode, for
- broadcasting its selected codes so that the other devices carry out the following steps:
- entering and comparing internally the analog codes and
- signalling the opportunities by display or sound means in the case of the matching of at least one code common to the two devices.

The nomenclature is modifiable and extensible by reformatting transmitted by cable, induction or high frequency transmission, from an external programming device, by setting the programming of the devices on "re-programming" with the help of selection means and/or introduction of data and display means.

Another aim of the invention is a device for remote connection of persons with common goals, poles of interest and/or sectors of activity, making it possible to carry out the above method. The device is characterised in that it comprises at least one management module for the ensemble, typically a micro-controller,

linked directly or not by a bus, to at least one display means, to at least one means of selection and/or data introduction, to at least one sound or other signal generator means, linked to at least one supply module. The data transmission ensemble also comprises at least one transmission means and one receiver means for waves, in particular high frequency waves, linked directly or not through the micro-controller to the memory which also contains operational software of the programmable database and linked to a second memory housing a downloadable database in addition to other operational software. The device is able to broadcast and receive the one or several selected memorised codes in the standard nomenclature linking with at least one other remote connection device located in the same operational distance, broadcasting and simultaneously receiving at least one of the said operational codes. The devices manage together the communication of said codes by an established conversational mode which circulates in a physical or non-physical transmission space generated by the devices which activate, if there is code matching, a sound signal and/or display of the selected parameters related to the matching code(s) of each device.

According to other specifications:

- the said data transmission ensemble comprises, besides one or several interface means able to link the device with other means of remote connection, in particular one of the interface means being able to connect a fixed receiver physically connected to the cable networks in such a way as to make it possible for peripheral devices such as computers or cable television to bring them selectivity services through high rated networks such as Internet of other tel-networks. Another of the interface means communicates with a mobile receiver linked by radio such as so-called alphapage devices, certain radio receivers or television sets, so that the user can select the sectors of activity or poles of interest broadcast.
- the material and computing components for transmission and processing of data are collected in a miniaturised and modular integrated circuit able to manage in stand-alone manner and direct the telematic functions of the method in a way compatible with the known circuit devices of cellular telephony, paging, computing or data management to allow them to communicate between themselves while adding the services of the above method to their own.

In order that the user can carry with him the device according to the invention and receive discretely the criteria of activities broadcast by the neighbouring devices at operational distance, the elements of the device according to the invention, such as the data transmission ensemble, the management module of the ensemble, connected by the bus to the display means, to the selection and/or data introduction means, the sound or other signal generator means, provided with energy by the supply module, are housed in a casing in such a way as to constitute a portable device.

In order that the user can adapt, choose, modify or add a code or a function which he has already selected in the processing unit, he has the possibility of switching the internal management of his device by means of selection and data introduction, and then to carry out any useful command in which each element is viewed on the display means, said display means, the means of selection and/or data introduction, the sound or other signals generator means, and the interface means being linked to the management module of the ensemble by at least one electronic interface bus.

Other specifications and advantages of the invention will be shown in the description given as a non-limiting example below and with regard to the attached drawings in which:

- Fig. 1 represents the operational diagram for a device according to the invention.
- Fig. 2 represents a diagram of two transmission loops generated by the presence of devices according to the invention during operation.

The analog electronic device 1 shown in Figure 1 comprises a module 2 for data processing linked directly or not to a bus 3 connected to a display module 4, a data selector 5, a sound generator 6, a rechargeable battery 7, a transmitting means 8, a receiver 9 of data transmission and several interface means 10, 11 and 12, able to link or adapt the device to other means of remote communications.
The operation and application software are safeguarded in the memories 13 and 14. A common reference nomenclature contained in memory 13 is presented by sections, groups, classes and locations to be read in columns to facilitate the choice of selection. This base nomenclature comprises all the selections of the service domains, market offers and demands and leisure activities, which it is possible to extend and correct at any time by adding elements in memory 14. For example, the section "Tourism" which is divided into groups such as "Travel, holidays" + "Hotel" + "Restaurants" + "Excursions, cruises" in their turn divided into classes such as "Hotel" + "Restaurant" + "Inns, B&B", divided again into locations such as "Town, countryside, mountain, sea" in such a way that the user selects, for example:
Tourism + Travel + Hotel + Countryside.
This tree structure mentions and lists many more activities such as job offers, car sales, apartment rentals, meetings, games etc. and makes it possible to select the activities focussed with the required precision in all domains such as commerce, services and leisure activities. The different elements and modules of the device are housed in the casing 15 of Figure 1 in such a way as to create a portable device 16, thus nomadic.
Alternatively, all or part of the device is adaptable to several other means of management and remote communications to retain the selected codes from the nomenclature base.
- Interface 10 can be connected to a fixed receiver connected physically to cable networks, to make them able to communicate selective services.
- Interface 11 can be connected to linked mobile receivers which receive information broadcasts in high frequency by a radio, television or "alphapage" network. This allows the user to select only the releases or programmes which interest him.
- Interface 12 can be connected to mobile phone systems to make them selective according to this method. This variant envisages using the keyboard and the sound and visual means of the cellular peripheral unit.
The set-up of the method operates in the following way:
After setting the device 16 in programming mode, the user selects a goal, a sector of activity or a pole of interest in the nomenclature. This selection of parameters is operated by listing on screen 4 of device 16 the different positions of divisions, groups, classes and locations of the nomenclature in place with the keys of selection and data introduction means 5. These keys command horizontal and vertical movements in the nomenclature as well as the different command features, among others for programming, selecting and memorising. Once the selection has been defined, the user activates the memorisation key and puts the device 16 in stand-by. Several selections can be memorised to be broadcast simultaneously and are stacked in the memory 14 so as not to restrict the user.
Once set in stand-by mode, the device 16 broadcasts the selected parameter(s) under coded form alternating transmission and reception. When the user carries the device 16a in stand-by and he arrives in the operational space of a second device 16b in stand-by, the two devices 16a and 16b generate a transmission space 17, as shown in Figure 2, in which the broadcast codes transit, in particular those which match with those programmed by the users. If there is matching between at least one of the memorised codes in each of them, the devices 16a and 16b indicate the availability by at least one visual and sound signal and display the selected element(s) on both screens 4a, 4b. The selected

pole of interest appears on screen 4a of the first device 16a in the language chosen by the user. This language can be different from that programmed in the other device 16b which will display on screen 4b a translation of the demand made through the device 16a. The conversational mode between devices 16a and 16b is automatically managed as soon as the transmission loop 17 is created by the presence of the devices in the same spaces where the said devices synchronise alternately in master and slave position to broadcast and receive the selected codes.

The method and the technique according to the invention are operational with a variable number of devices in the same transmission space. While devices 16a and 16b which have a common selected code generate between themselves a transmission space 17, the devices 16c, 19d, 16e, present at another distance, generate a second neighbouring transmission space 18. The device 16f entering in the transmission space 18 is positioned alternately as master or slave with the other devices 16c, 19d, 16e, while taking into account the device 16g which leaves the said transmission space 18. In the case of matching selected codes, the devices concerned among 16c, 19d, 16e, 16f, show up by at least a sound signal and the display of the selected elements on the screens 4c, 4d, 4e, 4f. The device 16g which has left the loop stops all signalling of opportunities, both acoustic and visual on screen 4g.

The method and the technique according to the invention are also operational with a variable number of transmission spaces. In the case where the transmission spaces 17 and 18 move geographically, they could then assemble to form a transmission knot at an operational distance where the devices 16a, 16b, 16c, 19d, 16e, 16f position themselves alternately as master or slave. In the case where device 16g is still present, it will be absorbed in the new space constituted as a function of the operational distance and integrated into the conversational mode in force in situ.

Device 19d is a non-mobile ensemble constituting a fixed terminal whose aim is to create or extend the directions and signs of a business such as a hotel, an employment agency, a garage etc. In this case, the users carrying devices 16c, 16e, 16f, generate the transmission loop 18 at an operational distance from the device 19d where they receive confirmation of the opportunity of room availability, a job offer or the car they are looking for. Since several other neighbouring businesses can use the devices according to the invention, the terminals can be seen because of a powerful luminous sign, which makes it possible to recognise the correct interlocutor visually.

In general, to avoid management of a voluminous or non-adapted data base, the common nomenclature is modifiable and extensible by reformatting in each language and in all sectors of activity. This operation is carried out by activating the function "Reprogramming" from the selection and data introduction means 5 and by reprogramming the memories 13 and 14 from an external encoder.

In order to limit the number of portable devices at the disposal of users such as radio receivers, devices called alphapage and cellular telephones, software and equipment variants are integrated into the devices according to the invention to diversify and refine their respective services. These variants linked by interfaces 10, 11, 12 bring, in addition, selectivity by sector of activity and not only individually as is the case so far. Besides this, these variants make it possible to extend the fields of application to national and international levels, so as to make quasi-personalised targeted offers.

Interface 10 is aimed at being connected to cable networks is available to apply, as an example, the device at the Internet level. Interface 11 is aimed at connecting peripherals by unidirectional high frequency transmissions such as radio and devices called alphapage, the data transmission means 8-9 in this case being adapted to identify broadcast signals superposed on the transmission wavelength. Interface 12 serves to link the said device to that of mobile cellular telephones. In this application, the various available components and

software of existing cellular units are completed by those of the infrastructure of the devices enabling correct operation of the method according to the invention.

Even though the invention has been described in combination with special structures, it is not limited to these at all and numerous variants can be added, as for example an identical device but more or less powerful and/or sensitive with a view to being adapted to new applications such as access controls or localisation of sites. It is also possible to programme this device in different ways in order to adapt it to new applications or performances.

The combinations of the different embodiments shown in the drawings or described above do not extend beyond the framework of the invention.

The reference signs inserted after the technical characteristics mentioned in the claims have the only aim of aiding the understanding of the latter and do not in any way limit their scope.

CLAIMS

1. Method for remote connection of nomadic devices (16a, 16b) characterised by the broadcasting in the ether of selective elements of messages by at least one transmitter-receiver device (16a) in transmitting function and at least one transmitter-receiver device (16b) in receiving function in order to establish in a direct fashion, selected interactive links by means of identification keys for different sectors of activity, common poles of interest and user codes in which the respective users are connected by said devices (16a, 16b) comprising at least the following means: a data processing module linked directly or not by a bus to a sound or other signal generator (6) and a memory (13) comprising a programmable database, said devices being transmitter-receivers (16a, 16b) and broadcasting the pre-programmed database according to a standard common to the said devices, said standard comprising a nomenclature, typically tree structure, of the common goals, poles of interests and/or sectors of activity defined in the language of the person, by divisions, groups, classes and locations, consisting of:

- selecting one or several poles of interest and/or sectors of activity of the standard in the first device,

- memorising the pole of interest and/or sector of activity selected,

- transmitting the assigned code to the pole of interest and/or sector of activity selected and alternately receiving the eventual codes of the standard transmitted by other devices,

- moving the first device until it reaches a distance sufficiently near to at least another device, alternately broadcasting and receiving one of the said codes of the standard to receive the code transmitted by this second device, the communications being information chosen by any person and transmitted at any time.

2. Method according to the preceding claim, characterised in that at the moment of broadcasting, the devices situated within a same operational distance form a transmission space (17, 18) while broadcasting and receiving alternately at least one of the said selected codes, the devices (16a, 16b, 16c, 16d, 16e, 16f) managing together the communications of the said codes by means of an appropriate communication protocol that occupies the said transmission space (17, 18) generated by the devices that activate, if there is code matching, a sound signal and/or the display of the parameters of the collective nomenclature in relation to the code or codes matching in each device, said display being in the programmed language.

3. Method according to one of the preceding claims, characterised in that the nomadic devices (16a, 16b, 16c, 16d, 16e and 16f) located and functioning at operational distance generate the transmission space (17, 18) in which the selected identification codes transit by means of the appropriate communication protocol that positions the said devices alternately (16a, 16b, 16c, 16d, 16e, 16f) in a situation of master or slave to allow them to broadcast, to receive, to identify and to process respectively between themselves said identification codes and their respective messages.

4. Method according to one of the preceding claims, characterised in that the first device (16f) arriving at a transmission distance (18) generated by the simultaneous operation of the devices (16c, 16d, 16e), carry out the following stages:

- adapting to the conversational mode then,

- switching alternately in master-slave mode, for

- broadcasting its selected codes so that the other devices (16c, 16d and 16e) carry out the following steps:

- entering and comparing internally the analog codes and

- signalling the opportunities by display (4) and/or sound (6) means in the case of the matching of at least one code common to the two devices.

5. Method according to one of the preceding claims, characterised in that the nomenclature is modifiable and extensible by reformatting, transmitted by cable, induction or high frequency transmission, from an external programming device by setting the programming of the devices on " re-programming " with the help of means of selection and/or introduction of data (5) and the display means (4).

6. Device for the remote connection of persons with common goals, poles of interest and/or sectors of activity making it possible to carry out the method according to any one of the preceding claims, characterised in that it comprises at least one module for management of the ensemble (2) typically a micro-controller, connected directly or not by a bus (3), to at least one means of display (4), to at least one means of selection and/or introduction of data (5), to at least the generating means of sounds or other signals (6), linked to at least one supply module (7), the data transmission ensemble also comprising at least one transmitter means (9) and a receiver means (8) of waves, in particular, high frequency waves. These are linked, directly or not, through the micro-controller (2) to the memory (13) comprising, in addition to the operation software, the programmable database and linked to a second memory (14) comprising a downloadable database in addition to other operation software, device (16a) capable of broadcasting and receiving the various memorised code or codes selected in the standard nomenclature linked with at least another connecting device (16b) located at an operational distance, broadcasting and receiving at least one of said selected codes, the devices (16a, 16b, 16c, 16d, 16e, 16f) managing together the communication of said codes by an established conversational mode that circulates in a physical or non-physical transmission space (17, 18) generated by the devices that activate, if there is code matching, a sound signal and/or the display of the parameters selected in relation to the matching code or codes of each device.

7. Device according to claim 6, characterised in that said data transmission ensemble comprising, besides one or several interface means (10, 11, 12) able to link the device with other means of remote connection, in particular one of the interface means (10) being able to connect one fixed receiver linked physically to the cable networks in order to allow peripheral devices such as computers or cable televisions to bring them the services of selectivity by high rate networks such as Internet or other tel-networks and another of these interface means (11) able to communicate with a mobile receiver linked by radio such as devices called "alphapage", some radio receivers or television sets, so that the user can select the sectors of activity and poles of interest broadcasts.

8. Device according to either one of claims 6 or 7, characterised in that the hardware components and computing elements for transmissions (8, 9) and for data processing (2, 5) are gathered in a miniaturised, integrated, modular circuit able to manage in a free standing and direct manner the data communication functions of the process in a compatible way with the circuits of devices known in cellular telephony, paging, computing or data management to allow them to communicate between themselves while adding to their own the services of the method according to one of the claims 1 to 5.

9. Device according to any one of claims 6, 7 or 8, characterised in that its elements such as the data transmission ensemble (1), the management module of the ensemble (2), connected by the bus (3) to the display means (4), to the selection and/or introduction of data means (5), the generating means of sound or other signals (6), supplied in energy by the supply module (7) are contained in a casing (15) in order to constitute a portable device.

10. Device according to any one of claims 6, 7, 8 or 9, characterised in that the means of display (4), the means of selection and/or introduction of data (5), the generating means of sound or other signals (6), the interface means (10, 11. 12) are linked with the management module of the ensemble (2) by at least the electronic interface bus (3).

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if more than one name is listed below) of the subject matter that is claimed and for which a patent is sought on the invention entitled:

METHOD FOR REMOTE CONNECTION OF MACHINES
AND CORRESSPONDING ELECTRONIC ANALOG APPARATUS

Regular
Design Application

the specification of which:

is attached hereto.

was filed on
and assigned application Serial No.

PCT FILED APPLICATION ENTERING NATIONAL STAGE

was described and claimed in International application PCT/FR99/01173 having an international filing date of May 17, 1999 and assigned US Application Number 09/700,697.

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information

Which is material to patentability as defined in 37, Code of Federal Regulations, § 1.56 and which is material to the examination of this application, namely, information where there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent, and

In compliance with this duty there is attached an information disclosure statement in accordance with 37 CFR 1.98.

VISA :

PRIORITY CLAIM

I hereby claim foreign priority benefits under 35 USC 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

PRIOR FOREIGN APPLICATION(S)

Country	Application Number	Date of Filing (day, month, year)	Priority Claimed
FRANCE	98/06494	19 May 1998	YES

(Complete this part only if this is a continuing application.)

I hereby claim the benefit under 35 USC 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of 35 USC 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial No. :
Filing Date :

Status-patented, pending, abandoned: ________________

I hereby claim benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below:

Application Serial No. :
Filing Date :

VISA :

POWER OF ATTORNEY

The undersigned hereby authorizes the U.S. attorney or agent named herein to accept and follow instructions fillin "" \d "" as to any action to be taken in the Patent and Trademark Office regarding this application without direct communication between the U.S. attorney or agent and the undersigned. In the event of a change in the persons from whom instructions may be taken, the U.S. attorney or agent named herein will be so notified by the undersigned.

As a named inventor, I hereby appoint the following attorney to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: ALAN W. YOUNG, Reg. No. 37,970, of YOUNG LAW FIRM, P.C., 4370 Alpine Road, Suite 106, Portola Valley CA 94028.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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